IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1, 5, 7-11,14 and 16 in accordance with the following:

1. (currently amended) A ~~S~~sample inspection apparatus comprising:

a pair of magnet assemblies located in a common cryostat and surrounding respective bores so as to define corresponding working regions in the bores;

a first sample positioning mechanism ~~which can be inserted~~ insertable in one of the bores to bring a sample into the corresponding working region, the magnetic field in that working region having a homogeneity or irofile suitable for performing a NMR experiment; and

a second sample positioning mechanism ~~which can be inserted~~ insertable in the other of the bores to bring a sample into the other working region, the magnetic field in that working region having a homogeneity or profile suitable for performing a different experiment on the sample.

2. (original) Apparatus according to claim 1, wherein the external field generated by each magnet assembly is no greater than 0.0005T at the centre of the working region defined by the other magnet assembly.

3. (original) Apparatus according to claim 1 or claim 2, wherein each magnet assembly is actively shielded.

4. (original) Apparatus according to claim 3, wherein each magnet assembly has end shielding coils.

5. (currently amended) Apparatus according to claim 1 or 2 ~~any of the preceding claims~~, wherein the magnet assemblies are arranged with their bores coaxial to define a common bore.

6. (original) Apparatus according to claim 5, wherein the sample positioning mechanisms are insertable into opposite ends of i u common bore.

7. (currently amended) Apparatus according to claim 5 ~~or claim 6~~, wherein the magnet assemblies comprise a single magnet.

8. (currently amended) Apparatus according to claim 1 or 2 ~~any of claims 1 to 4~~, wherein the magnet assemblies are arranged with their bores substantially parallel and side by side.

9. (currently amended) Apparatus according to claim 1 or 2 ~~any of the preceding claims~~, wherein the magnet assemblies are controllable to generate the required magnetic fields in each working region simultaneously.

10. (currently amended) Apparatus according to claim 1 or 2 ~~any of the preceding claims~~, wherein the bores are at room temperature.

11. (currently amended) A ~~S~~sample inspection apparatus comprising:

a magnet assembly located in a cryostat and surrounding a bore so as to define a working region in the bore;

a first sample positioning mechanism insertable ~~which can be inserted~~ in the bore to bring a sample into the working region, the magnet assembly being controllable to generate a magnetic field in the working region having a homogeneity or profile suitable for performing a NMR experiment; and

a second sample positioning mechanism insertable ~~which can be inserted~~ in the bore to bring a sample into the working region, the magnet assembly being controllable to generate a magnetic field in the working region having a homogeneity or profile suitable for performing a different experiment on the sample.

12. (original) Apparatus according to claim 11, wherein the sample positioning mechanisms are insertable into opposite ends of the bore.

13. (original) Apparatus according to claim 11 or claim 12, wherein the bore is at room temperature.

14. (currently amended) Apparatus according to claim 1, 2, 11 or 12 ~~any of the preceding claims~~, further comprising a system for supplying portions of a sample to each sample positioning mechanism from a common source.

15. (original) Apparatus according to claim 14, wherein the common source comprises a liquid chromatograph.

16. (currently amended) Apparatus according to claim 1, 2, 11 or 12 ~~any of the preceding claims~~, wherein the second sample positioning mechanism is suitable for use in ion cyclotron resonance mass spectroscopy.